

IN THE CLAIMS:

A complete listing of all the claims is now presented.

Claim 1. (Cancelled).

Claim 2. (Currently Amended).

A method for producing a silicon semiconductor wafer comprising

pulling a silicon single crystal from a melt to form voids of aggregated vacancy defects, in the presence of hydrogen, using the Czochralski method, wherein the silicon single crystal is pulled under a hydrogen partial pressure of less than 3 mbar thus substantially preventing oxygen from oxidizing internal surfaces of the voids;

doping the silicon single crystal with nitrogen and producing a nitrogen concentration of  $5*10^{12}$  atcm<sup>-3</sup> to  $5*10^{15}$  atcm<sup>-3</sup>; and

separating the silicon semiconductor wafer from the silicon single crystal.

Claim 3. (Cancelled).

Claim 4. (Original).

The method as claimed in claim 2, comprising

placing a cooled heat shield around the silicon single crystal; and

cooling the silicon single crystal with the heat shield, for a period of time within which the silicon single crystal cools from a temperature of 1050°C to a temperature of 900°C in less than 120 min.

Claim 5. (Currently Amended).

The method as claimed in claim 2, comprising subjecting the semiconductor wafer to a heat treatment in an atmosphere which contains less than 3% by volume of hydrogen and the balance substantially being argon.

Claim 6. (Original).

The method as claimed in claim 2, comprising subjecting the semiconductor wafer to an oxidation treatment.